

KING, (A.F.A.)

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Funis, and its Treatment.

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A. F. A. KING, M.D.,  
OF WASHINGTON, D. C.

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*Read before the Medical Society of the District of Columbia,  
April 27, 1887.*

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*Reprinted from the Journal of the American Medical  
Association, September 24, 1887.*

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## DYSTOCIA FROM SHORT OR COILED FUNIS, AND ITS TREATMENT.

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In a paper read before this Society six years ago, and published in the *American Journal of Obstetrics* (New York, vol. xiv, No. 2, April, 1881, pp. 322-328), and in a subsequent publication in the *Transactions of the American Gynecological Society* for 1886, I have called attention to protracted labor due to short or coiled funis, and laid some stress upon the method of expediting delivery in such cases by changing the posture of the lying-in woman from a recumbent position to a sitting, kneeling or squatting one. An instinctive desire on the part of the woman to assume such a change of posture was also mentioned as one of the symptoms indicating shortness or coiling of the cord when it impedes delivery.

At the time of reading my first paper, six years ago, I hopefully requested the members of this Society to take the matter into consideration and report the results of their observations in practice, bearing upon the questions I had presented. I regret to say that, thus far, no member of the Society has reported any case relating to this subject, with the exception of Dr. W. H. Taylor, who kindly sent me notes of one case, which I incorporated in my recent paper published in the *Transactions of the American Gynecological Society*, and which, in all respects, illustrated the views I had previously presented. Neither have any cases conflicting with these views (and which would have been equally useful and acceptable) been reported. It can scarcely be doubted that some cases, at least, of protracted labor from short or coiled funis, must have occurred

within the experience of the members of this Society during the last six years. They have therefore, it would seem, either been overlooked, owing, perhaps, to the absence of any *serious* danger attending them, or else I have failed to present the matter in such a way as to secure for it the earnest consideration which I am more and more convinced it deserves. Hence, I again solicit the attention of the Society to this subject.

The cases in which a short or coiled cord lead to any serious danger are, perhaps, few; they nevertheless occasionally occur, as the records of obstetrical literature amply demonstrate. But there are, I believe, very many cases in which, without any serious danger, labor is considerably protracted and many hours of agony added to the parturient woman's sufferings; and which might be safely and quickly ended by the postural treatment to which I have referred. It is to this latter class of cases that I have particularly invited attention. That a woman should be permitted to suffer, unnecessarily, a single hour—much less several hours—when such suffering can be safely avoided, is intrinsically wrong. And while moderate protraction of a labor is not necessarily serious, yet, other things being equal, it may be said that every hour of delay, produced by accidental complications, does add *something* to the element of danger, especially with women whose nervous energies have been from some cause enfeebled, and who, in passing through the ordeal of childbirth, have no surplus strength to spare for complicating accidents, and consequent protracted suffering. Furthermore, when a protracted second stage of labor, from unsuspected short or coiled cord, leads to the application of forceps (a not uncommon occurrence), with, especially in primiparæ, rupture of the perineum, the element of danger is again, to some extent, increased.

What I desire, in particular, to insist upon is, that the danger in these cases (whatever its degree); the

delay (whatever its duration); and the suffering (whatever its intensity and persistence); may be obviated, in the great majority of cases—perhaps not in all—by changing the posture of the female as already stated.

While of late, modern obstetric authors, for the most part, ignore coiling of the cord as a cause of dystocia, it is not a matter of surprise that they say but little of its treatment, and nothing whatever of its treatment by posture. There was a time, however, in the history of obstetrics, a century or two back, when protracted labor from short cord was recognized and treated of by the then leading authorities of the obstetric art. And among the methods of treatment then employed, I find—with considerable gratification—that the best results were obtained by changing the posture of the woman exactly in the manner that I have recently recommended. And one of the chief objects in this paper is to reinforce my position with the recorded experience of those who have successfully adopted the method of treatment referred to; and I may also mention another method advised by Smellie; with which, however, I have had no practical experience.

But before citing these older authorities, it may be of interest to inquire why the orthodox teaching of modern ones has so materially changed as that but little mention is now made, in our latest text-books, of this kind of dystocia? I cannot but think the explanation of this change of opinion must be referred to the more general and frequent use of forceps in protracted labor during the last century. That is to say: given a case in which the head has reached the perineum, or has almost reached it, and then becomes arrested, or fails to make material progress; and in which, after several hours of ineffectual effort, the woman begins to exhibit signs of commencing exhaustion: under these circumstances, nine times out of ten, the modern obstetrician—having simply



satisfied himself that there exists no malproportion between the head and pelvis, and that there is no fault in the mechanism—will apply forceps and forcibly extract the child, never suspecting a short or coiled cord until he finds it after the head is born. In the great majority of cases this method of practice succeeds without material injury. The cord is not ruptured; the uterus is not inverted; there may, perhaps, be more bleeding than usual, owing to the placenta having been prematurely separated from the uterine wall by traction on the cord, before the child was expelled. But by the usual pressure of the hand upon the fundus uteri during the delivery, the womb contracts, the placenta is found in the vagina, or partly in it, projecting from the os uteri; the case ends well; mother and child recover, and thus the delay occasioned by the coiled or short cord is disregarded and considered to be of no material importance, the little difficulty being so easily overcome by the use of forceps. This is modern practice. But it was different a century ago, when the use of “instruments” in labor was much less frequent, and regarded with something like dread or even timidity. Dr. Davis, of London, an eminent practitioner and teacher of midwifery, himself the inventor of an improved forceps bearing his name, we are told, only applied the instrument with a frequency of once in about 1,200 deliveries; while the city practitioner of to-day, not uncommonly, applies forceps as often as once in every 6 or 7 labors. Moreover, of late years the modern obstetrician has become disenthralled from the maxim of Dewees—“meddlesome midwifery is bad”—which formerly exerted an exaggerated influence and led to injudicious expectancy in obstetric practice.

These, I think, are the real reasons why shortness of the cord, as a cause of dystocia, has been ignored—at least more or less ignored—by recent obstetrical authorities. That labor is protracted by the compli-



cation in question, is just as true now as it was a hundred years ago; and our being able in most cases to remedy the difficulty by the unscientific application of "brute force" in violently extracting the foetus with forceps, should not be allowed to stand in the way of that higher and far more scientific course of action which demands a recognition of the cause of delay, and thus opens the door to other and more desirable methods of treatment, one of which, I am persuaded, is change of posture. I have said forceps overcome the difficulty in a great many cases. In others, however, forceps completely fail to accomplish delivery, the force required being either beyond the strength of the obstetrician, or exceeding the limit which he considers to be judicious in obstetric practice. Who of us cannot recall cases having something like the following history? It is an ordinary labor case; the head is at the perineum; there has been no progress for several hours; there are symptoms of exhaustion. Dr. Tommas puts on the forceps, pulls as hard as he dare, tires himself out, and gives it up as a bad job. Dr. Richard is sent for, and does exactly the same. Then Dr. Henry comes and performs the same programme for the third time, and with the same result. Eventually, during the second round, or perhaps during the third, one of them succeeds in extracting the head, and an unsuspected short or coiled cord is discovered, which may or may not be regarded as a cause of the difficulty—usually *not*, in modern practice. If the child be alive, the obstetricians are credited with wonderful skill; if it be dead, no one is surprised after considering the long and difficult instrumental delivery which required "three doctors." Indeed, no one would wonder if the woman died; and if she survive, what dangers—of bruising and laceration of the soft parts—of nervous shock—of subsequent acute inflammation, fever, and septicæmia—and what agonies of pain—has she not endured,

from these prolonged and violent efforts, at the hands of Drs. Tom, Dick and Harry!

It may be said this is an exaggerated picture. I acknowledge it represents a minority case. I have already said forceps will *do*, in the majority. But between the *very* difficult, and *very* easy cases, there are many intermediate ones of moderate danger and moderate difficulty. It may be further supposed that no such case would occur in the hands of a careful and intelligent obstetrician. He would, we should think, suspect the coiled cord before birth, diagnose it, and institute treatment accordingly. Yet why should he do this when the leading authorities of the period, whose teachings he has been taught to follow, give no attention to coiled cord as a cause of dystocia, but, on the contrary, ignore or deny it.

To illustrate that cases of the greatest gravity may occur occasionally, even to the most expert practitioners, I may call attention to a case reported to the Obstetrical Society of New York, about a year after the publication of my first paper, by Dr. W. T. Lusk (see "Supplement" to the *Am. Jour. of Obst.*, N. Y., November, 1882, pp. 324-326). He tells us: "A patient was brought to the Emergency Hospital, who stated that she had been in labor five days. Before her admission a number of physicians had seen her, and had made ineffectual attempts at delivery." (He does not say that these "attempts" were made *by forceps*, but I presume they were. It is the same old story.) When Dr. Lusk first saw her, the external organs were acutely inflamed; temperature 103.5°. The head could be seen through the vulva, close down by the outlet. The house physician had delayed sending for Dr. Lusk for some *six hours*, because it appeared as if the child would be born every moment. Dr. Lusk gave ether, applied forceps, but found much more resistance in delivery than he had expected. In a short time, however, he managed to extract the head, and then on passing his

finger up, found the cord very tense, and wound a number of times round the neck. "He was about to cut the cord, which *evidently had been the cause of delay in delivery*, when a pain came on, and the child, placenta, and cord were expelled together." He adds: "The child, *of course*, was dead." And a further interesting addition to this history was the death of the mother a few days later, from sloughing of the vagina communicating with the peritoneal cavity. It is further stated that "the slough doubtless occurred as the result of the great and long-continued pressure of the child's head. The case was specially interesting regarding the difficulty of labor due to shortening of the cord, a question exciting considerable discussion of late."

In the report of the discussion of this case, Dr. Barker is credited with the following remarks: "Regarding shortness of the cord as sometimes being a cause of difficult labor, he considered it an established fact, and he himself had often seen examples of it. A case which he had reported before might again be alluded to. . . . When labor came on he found no disproportion between the size of the foetal head and that of the pelvis. The presentation was favorable and the labor pains were regular and vigorous; finally the head came down and began to distend the vulva, but afterwards the patient had severe pains for about an hour, without the slightest progress being made. Chloroform was given, and the forceps applied; but just before extracting the head he withdrew the instrument" (the report does not state *why* he did so, but I suppose it was because the head would not come) "passed up his finger, and found the cord wound three times round the neck, and very tense. Having no bistoury with which to divide the cord, he sent hurriedly to a neighboring physician for one, which arrived soon enough to enable him to extract the child alive, after division of the cord. It was perfectly evident that the short cord had retarded



labor; and, had he proceeded with delivery by the forceps, the placenta must have come away, and in all probability, the child's life, and perhaps the mother's, been destroyed. The cord was 11 inches long; or but 2 after allowing three circles round the neck. This was about twenty years ago; before then he was always in the habit, before bringing down the head, of passing in the finger to see whether the cord was round the neck, and if so, cutting it, which he had found it necessary to do on several occasions; he was more particular to do so since, and was convinced that this was oftener a cause of difficult delivery or retarded labor, of death to the child, and of violent hæmorrhage before the expulsion of the placenta, than was commonly supposed."

In considering what we here find in this report, I think we may fairly conclude that neither Dr. Lusk nor the several physicians who had made ineffectual attempts to deliver, had suspected the real cause of delay before the instruments were applied. And in Dr. Barker's case it would seem, the same thing occurred, for he did not feel for the coiled funis until removing the forceps just before the head was extracted. If then mistakes of this sort occur with men so eminent in the profession as Drs. Lusk and Barker, they may, and doubtless do occur, with much greater frequency in the practice of others who are less experienced and expert. With regard to both these cases I am much inclined to the opinion that delivery would have occurred without the use of instruments—either forceps or bistoury—and probably in a very few minutes, had the women been placed in a sitting posture.

In conclusion I may now quote from some of the older authorities, as to the influence of a short cord in retarding labor, and the methods of treatment advised to be practiced.

Dr. David Spence, writing in 1784 ("A System of Midwifery," Edinburgh, pp. 175-178), says: "The

delivery may be retarded by the natural shortness of the umbilical cord, or its being twisted round the neck, or any other part of the child. This is commonly first discovered when the head is so far advanced that every pain seems to promise the delivery of it, but which, on the pain going off, retracts again as far as before. We are advised by many authors of note, and among others by Smellie ("Midwifery," vol. i, p. 188) to introduce in a case of this nature, one or more fingers into the rectum, and during the pain, by pressing upon the forehead of the child at the root of the nose, detain its head till the return of the pain, when it will gradually be pushed further and further down, so as at last it is forced through the external parts." "But I have seen several cases (p. 177) where almost one half of the head was, with every pain, protruded through the parts and as often retracted, and that *for so long a time*, as to render either having recourse to the above practice, or relieving the woman by the assistance of forceps, in order to shield her from inflammation of the parts consequent upon the continued pressure of the child's head against her in the birth." Dr. Spense does not mention postural treatment.

Dr. Smellie in his work (vol. ii, p. 291) reports a case in which the cord was "four times convoluted" and in which delivery was accomplished by the rectal method. In another case (pp. 292-3) he says the head came down to the middle of the pelvis after several hours—the waters broke at the os externum—"the head began to be drawn upwards immediately after the membranes broke." "I resolved to assist in bringing the head lower, and keeping it so, with the help of the forceps, had it continued much longer in that situation; but as she had every now and then a strong pain, I first tried what might be effected by different positions, and directed her to bear the pains standing, sitting, kneeling, lying on one side, or resting on the bed in a posture between sitting and lying.

This last was the most successful, and in three or four strong pains, the head, though still retracted, advanced lower and lower and began to dilate the os externum. But observing that it made another stop I introduced two fingers into the rectum and completed the delivery." The funis was coiled three times around the neck, Dr. Smellie here tells us that he found this rectal method in Mr. Ould's treatise, published in 1742.

Dr. Samuel Bard ("Compendium of the Theory and Practice of Midwifery," New York, 1819), after referring to Smellie's rectal method, goes on to say: "It is, therefore, more safe to leave this matter to the effect of a little longer time, and a few more pains, turning the woman from her side to her back, and with her head and shoulders so much raised, as to add the weight of the child to the pressure of the pains, or, what may prove more effectual, to get her upright on her feet at the back of a chair; and sometimes, though not apparently for the same reason, kneeling at the bedside will produce the same happy consequences." On page 262 he describes a case in which, however, he does not seem to have employed a change of posture. He says: "In time of pain the vertex pushed down into the pelvis. I gave the patient every encouragement in my power, having reason to believe the event would be speedy and favorable, but herein I was disappointed; for although the pains still continued powerful, they were still ineffectual for many hours, which surprised me the more as the uterus had receded from the head of the child, which was not large; . . . the woman, after having undergone uncommon severity of pain for the last seven hours was finally delivered." The funis was four times convoluted round the neck of the foetus which came away together with the placenta."

Prof. Henry Miller, of Louisville, ("Principles and Practice of Obstetrics," 1858, pp. 489-450) writes: "It was at one time very generally believed that such



a disposition of the cord may operate as a serious impediment to the expulsion of the head, the shortened cord retracting the head upon the subsidence of each pain; and it was even deemed necessary in some instances to divide it with scissors to allow the head to emerge." He then refers to Smellie's rectal manœuvre, but says "there is reason to doubt its reality;" and that the efficacy of the alleged pressure was most likely due to the consequent continued pressure upon the resisting perineum, which (and not the short cord) caused recession of the head.

Simpson, in his "Lectures on Obstetrics," 2d ed., 1858, p. 554, says: "In some cases shortness of the funis or twisting of the cord around the foetus, forms an impediment to labor. Naëgelé and others have doubted that shortness of the cord can act in this way." "Plenty of cases are on record, however, in which difficult labor occurred in connection with shortness of the funis."

Dr. Lee, ("Lectures on Midwifery," p. 121,) says: "There can be no doubt that it is a very common cause of protracted labor." On the other hand Churchill (p. 108) states that coiling of the cord is alleged to be a cause of difficult labor, owing to the shortening occasioned by it, but this he believes "to be wholly imaginary."

Denman, in his "Introduction to the Practice of Midwifery," 1832, 7th ed., London, pp. 229-30, remarks that: "The shortness of the funis is always to be suspected when the head of the child is retracted upon the declension of the pain, and it may sometimes be discovered that it is more than once twisted round the neck of the child long before it is born. It has been thought that far the greater number of children are born with one or more convolutions of the funis round the neck."

"Various methods have formerly been recommended for preventing this retraction of the head, some of which are insufficient and others unsafe; and the in-

convenience is usually overcome by giving the patient more time. But if the child should not be born when we have waited as long as we believe to be proper and consistent with its safety, or that of the parent, it will be *requisite to change her position*, and instead of suffering her to remain in a recumbent one, to take her out of bed, and raise her upright, to permit her to bear her pains in that situation; or, according to the ancient custom of this country, to let her kneel before the bed, and lean forwards upon the edge of it; or, as is now practiced in many places, to set her upon the lap of one of her assistants. By any of these methods the retraction of the head of the child is not only prevented by its own gravitation, but the weight of the child will be added to the power of the pain, and it will likewise be expelled upon an inclined plane instead of a level. In the course of practice, I can with *infinite satisfaction*, recollect a *great number* of cases, in which, by adverting to the benefits gained by an erect position, labors have not only been accelerated, but the use of instruments, which were before thought necessary, has been avoided."

Without accepting all of Dr. Denman's statements, his practice sufficiently indicates that the postural treatment of dystocia from short cord is by no means new, but a method already demonstrated to be useful, although of late years overlooked or neglected.

His theoretical explanations of its utility are in part correct, and accord in some degree with my own, as well as with those of Dr. Barnes, of London, who in discussing Dr. Duncan's late essay before the London Obstetrical Society, ("Trans. Obstet. Soc. of London," vol. xxiii, 1881, p. 254) said "he would submit, as a means of lessening the tension of the cord artificially shortened, the method of compressing the uterus downward during the second stage." I believe, however, no one can do this half so easily or effectually by manual pressure, as can be accom-

plished by changing the posture of the woman in the manner before stated.

To illustrate with what indifference coiling of the cord is regarded by the general practitioner, I may call attention to "A Country Doctor's Obstetric Record," recently published in the *Philadelphia Med. and Surg. Reporter*, for April 9 and 16, 1887, by Dr. G. Law, of Greeley, Colorado. His record includes about 360 labors. While it is true that in many normal cases, very meagre particulars are given, in a good number in which *abnormal* phenomena occurred, they are dwelt upon with considerable detail. In *not one* instance does he make any reference whatever to coiling of the cord. Yet he does mention several cases (about a dozen) in which a lingering second stage required the use of the forceps and some of them with rupture of perineum. With relation to *actual* shortness of the cord, he gives one interesting case, as follows:

"Feb. 22, 1882. Mrs. S., a very large, strong woman. Vertex. The most forcible expulsion or second stage efforts I ever witnessed; tried to modify them by the free administration of chloroform. Notwithstanding the extreme force of the expulsive efforts, and a most capacious pelvis, and no fault of position in the child, the second stage was protracted. Finally the child, a large and finely-formed male, together with the placenta and a *pailfull of blood*, was suddenly expelled. The child dead and completely exsanguined. The cause was a funis 4 inches long, abnormally thick and strong. The placenta had been pulled from its uterine attachment before the completion of the labor, and the child had died exsanguined. Would I have saved the child if I had used forceps and delivered quickly?"

*My answer to the doctor's question would be: You might in all probability have saved it by changing the posture of the woman, so as to force the entire womb and its contents deeper down into the pelvic cavity.*







